



Food and Agriculture
Organization of the
United Nations

AFRICA
SUSTAINABLE
LIVESTOCK
2050



Livestock production systems spotlight

BURKINA FASO

Cattle and
poultry sectors



USAID
FROM THE AMERICAN PEOPLE

Financial support provided by the United States
Agency for International Development (USAID)

**ASL
2050**

Livestock production systems spotlight

Cattle and poultry sectors in Burkina Faso

1. Introduction

Policies and investments in the livestock sector are effective when they take into account the multiple dimensions of livestock farming. These dimensions include monetary and non-monetary benefits for producers and other actors along the value chain, such as income, food, draft power and insurance. They also include public health and environmental dimensions, such as the availability of protein for good nutrition and health, the use of dung for fertilizing soil, or the negative impacts of zoonotic diseases on public health and the consequences of overgrazing for the environment.

A multi-stakeholder multi-disciplinary approach is a precondition for designing and formulating effective livestock policies and investments, which consider and manage the trade-offs inherent in the multiple dimensions of the sector. When stakeholders, looking at the livestock sector from different perspectives, share a common understanding of the livestock production systems – agreeing on common descriptions of the production systems and sub-systems – they can arrive at constructive conclusions about the pros and cons of alternative policy actions and investments.

This brief presents a snapshot of poultry and cattle production systems in Burkina Faso as agreed by key national stakeholders in the livestock sector, and notably the Ministry in charge of Livestock, the Ministry in charge of Environment, the Ministry of Public Health and the various national stakeholders concerned by the development of the livestock sector. It is the first time these stakeholders have ever embarked in a multi-disciplinary process to jointly define poultry and cattle production systems. This process involved a three-step approach:

- Based on their knowledge and expertise, the stakeholders agreed on a narrative description of the different livestock production systems.
- They have validated and improved poultry and cattle distribution maps of the FAO Gridded Livestock of the World (GLW) and identified, for each administrative unit, the relative proportions of the different production systems (poultry: 98 percent extensive and 2 percent intensive; cattle: 87 percent extensive and 13 percent intensive).
- Stakeholders have assembled datasets, policy documents, and published and unpublished literature on poultry and cattle production systems and generated statistics on the different production systems. Geographic variables have allowed adding ‘add-up’ information from different sources.

This approach, while not perfect, has three strengths:

- It is stakeholder driven, stakeholders ex-ante define the different livestock production systems.
- It allows ‘adding-up’ scattered information by using geographical locations as the common denominator.
- Its outputs can easily be visualized through combining maps and bar charts.

2. Why poultry and cattle production systems?

As part of the implementation of Africa Sustainable Livestock 2050¹, the Ministers responsible for livestock, health and environment have engaged stakeholders to assess the current and long-term impact of livestock production systems on the economy and people’s livelihoods, on public health and on the environment. To start with, they have agreed to focus on two livestock sectors.

¹ <http://www.fao.org/ag/againfo/programmes/en/ASL2050.html>

Poultry and cattle were selected by stakeholders because of their relevance for the national economy and people’s livelihoods, their being a priority in the current policy framework (e.g. PNDES), and their anticipated growth in the coming decades.

3. Poultry in Burkina Faso: a snapshot

Poultry is one of the main agricultural industries in Burkina Faso. It represents 6 percent of agricultural value added, with the country producing over 140 000 tonnes of meat and 6 000 tonnes of eggs per year, valued at 0.08 billion USD in 2009 and more than 0.14 billion USD in 2011. According to the CAPES (2007), poultry meat (all systems included) contributes 16.47 percent of the meat consumed in Burkina Faso. Per capita consumption is approximately 8 of poultry meat and 1 kg of eggs per year. The poultry sector comprises large backyard/extensive producers (about 1 million producers) and intensive integrated, specialized producers (328 operators). Stakeholders have identified two poultry production systems and four sub-systems in Burkina Faso: extensive systems – liberty and semi-liberty (98 percent) and intensive systems – semi-intensive and intensive (2 percent).

Table 1: Poultry production systems in Burkina Faso

Extensive systems (98%)		Intensive systems (2%)	
Liberty	Semi-liberty	Semi-intensive	Intensive

3.1 Extensive poultry production systems

The extensive poultry systems comprise 98 percent of the poultry flock in the country and supplies 99 percent of meat and 86 percent of egg production. 99 percent of poultry farmers fall in this system (RGA 2010). The average flock size is 5–50 animals. Production is sold in local markets (collectors) and to neighbors. There are two major extensive production sub-systems: liberty (free-range) and semi-liberty (semi-free-range).

3.1.1 Liberty sub-system

Practiced in the northern region of Burkina Faso, birds in the liberty sub-system are free to scavenge and neither feed, healthcare, or shelters are provided. Flock size varies from 1–25 animals, while the carcass yield is estimated to be 1 kg at 7–8 months of age, while the average laying rate is 90 eggs per year per female Guinea fowl. Farmers collect eggs at specific laying periods for sales, gifts and self-consumption. On average about 18 percent of Guinea fowl and 11 percent of chicken eggs are self-consumed.

3.1.2 Semi-liberty sub-system

The semi-liberty sub-system is practiced in the central, western and southern parts of the country. Flock size varies from 5 to hundreds of birds, with no feed supplementation and no watering provided in 99.03 percent of the farms (RGA 2010). Healthcare is provided occasionally and in about half of farms (43.7 percent of chicken farms and 56.8 percent of Guinea fowl farms do not adopt any animal health practice). Night shelters for chicken and Guinea fowl are provided in 62 percent of chicken farms and 52.5 percent of Guinea fowl farms. The carcass yield is estimated at 1 kg at 6 months and the laying rate at 90 eggs per year, per female Guinea fowl. The self-consumption rates are similar to the liberty system.

3.2 Intensive poultry production systems

Intensive systems represent less than 2 percent of meat production in Burkina Faso and about 14 percent of egg production. They include the 'semi-intensive' and the 'intensive' sub-systems, with the latter including both 'modern layer' and 'modern broiler' farms.

3.2.1 Semi-intensive sub-system

The semi-intensive poultry sub-system involves fattening chickens, Guinea fowl, turkeys and waterfowl (ducks or geese) purchased from extensive poultry producers. In some cases, layers are also fattened. Semi-intensive poultry farms are found in peri-urban areas of major cities, including Ouagadougou, Bobo Dioulasso, Banfora, Koudougou, Boromo, etc. There are no statistics on the number of farms belonging to this system, but flock sizes vary between 20 to 500 birds. Poultry farms use modern production practices in terms of housing, feeding and health care, often supported by artisanal solar and other energy source incubators. All output is sold to urban markets.

3.2.2 Intensive sub-system of layer and broiler

The intensive poultry production sub-system included 868 450 layers and 70 605 broilers (including cockerels) in 2016. There are 328 modern farms, concentrated around major cities (Ouagadougou, Bobo Dioulasso, Banfora, Koudougou, Ouahigouya, Tenkodogo and Gaoua). Flock size ranges between 200 to over 120 000 birds. These farms are owned by public or private sector employees, traders and businessmen with enough capital or emerging young unemployed and retired people. The majority of farms are engaged in both layer and broiler production.

Intensive farms have appropriate infrastructure, and follow effective feeding and health protocols. Mortality rates are around 5–10 percent for chicks and 3 percent for chickens. Carcass weight yield is estimated at 2 kg at ≤ 1.5 months (36–42 days) and birds lay up to 220 eggs per year. Production is sold to supermarkets, restaurants and hotels.

Intensive poultry operators are organized in a Union encompassing 10 regions (Centre, Centre-Nord, Centre-Est, Centre-Ouest, Centre-Sud, Est, Nord, Plateau Central, Hauts-Bassins, Cascades and Sud-Ouest).

3.3 Threats

The principal threats in the poultry production systems concern (i) the control of enzootic diseases (NCD, Gomboro) and emerging and reemerging diseases (HPAI), (ii) the quality of medicines, the fraudulent avian imported products and (iii) the management of biosecurity issues in farms.

3.4. Opportunities for poultry sector

The main opportunities for the poultry sector in the country rely on (i) the increase in the domestic market because of demographics, urbanization (with emerging middle class), development of the mining sector, and major international events held in the country (SIAO, SITHO, SNC, FESPACO, etc.), (ii) the establishment of a future agricultural Bank and (iii) the elaboration of policy guidance documents and investments plans.

3.5 Challenges

Main challenges concern (i) the diseases control and strengthening of regulation (biosecurity measures), (ii) the management in farms to limit the appearance and the spillover of the high economic incidence of zoonotic diseases (loss of productivity and markets), greenhouse gas emissions and other damages to the environment and (iii) the improvement of economic profitability to deal with competition and fraud.

4. Cattle in Burkina Faso: a snapshot

Cattle keeping is one of the main agricultural industries in Burkina Faso. It represents 36–40 percent of the agricultural value added, with the country producing over 30 million tonnes of beef meat and 264 million tonnes of milk per year approximately valued at USD 0.022 and 0.12 billion respectively. Per capita consumption is approximately 6 kg of beef meat and 17–18 litres of milk per year. The sector largely relies on local breeds, with at least 0.5 million households keeping cattle in extensive systems. Stakeholders have identified two cattle production systems and four sub-systems in Burkina Faso: extensive systems – pastoral and agro pastoral (about 87 percent) and intensive systems – semi-intensive and intensive (about 13 percent).

Table 2: Cattle production systems in Burkina Faso

Extensive systems (87%)		Intensive systems (13%)	
Pastoral	Agro-pastoral	Semi-intensive	Intensive

4.1 Extensive cattle production systems

4.1.1 Pastoral sub-system (transhumance):

Pastoral systems comprise about 12–17 percent of the cattle population (mainly Fulani zebu) and about 9 percent of all livestock keepers (MRA 2010). Transhumant pastoral systems are predominant in the Sahel, Eastern region and in the cotton basin located in the west of the country. The number of farms keeping cattle is estimated at 40–50 thousands, with average herd sizes varying from hundred to several thousand animals.

In pastoral systems, animals are on the move and, therefore, housing is non-existent, limited to branches to delineate the rest area. Feeding is from pasture and crop by-products and water is sourced from rivers, dams and boreholes along the transhumance corridors. Vaccination is not systematic (less than 30 percent of animals are vaccinated).

In order to facilitate the movement of animals, transhumance areas and corridors covered by regional agreements have been identified and marked. In particular, in the so-called great transhumance/pastoral, animals are trekked hundreds of kilometers from north to south or even across national borders; in the small transhumance animals are moved during a short period, around 2 to 3 months, in between nearby towns (less than 40 km).

Meat yield is estimated at 112–113 kg per carcass (only sold to butchers in case of diseases or accident) and milk production per cow is estimated at 110 litre /lactation, out of which 80–100 percent is reserved for self-consumption.

4.1.2 Agro-pastoral sub-system (sedentary)

In agro-pastoral systems livestock moves at a distance not exceeding a day walk from the farm. The sedentary pastoral system is practiced by sedentary herders, who also grow some crops. The agro pastoral system or village pastoralism is practiced by crops farmers who also keep animals.

The agro pastoral system is the dominant cattle keeping mode in the 13 regions of Burkina Faso. It covers about 75 percent of the cattle population (all local breeds: taurine and zebu) and 85 percent of all cattle keeping households (>360 thousand households). The herd average is 5–100 heads. Housing is common, which facilitates the collection of dung, 49 percent of cattle have enclosed wooden habitats.

Healthcare (mainly vaccination & de-worming) is common, with about 54.6 percent of the animals receiving preventative health practices. Feed largely comes from natural pastures (83 percent), and

partly from cereal by-products (12 percent) and other crop by-products (2 percent). Milk productivity is estimated at 180 litres/cow and six percent of production is self-consumed. Meat yield is estimated at 11–114 kg per carcass, with any surplus sold in local markets and to neighbors.

Despite of several productivity constraints (e.g. 5.1 percent average mortality), extensive systems are the main providers of milk (95 to 99 percent) and meat (90 percent) in the country (MRA, 2010).

4.2 Intensive cattle production systems

In cattle intensive production systems, livestock keepers invest substantial resources in infrastructure and modern husbandry practices. Intensive systems include two variants: Semi-intensive and intensive.

4.2.1 Semi-intensive sub-system

It involves about 11 percent of all households keeping cattle, including for fattening purposes or for dairy production. The commercial fattening farms are located near major export markets and slaughterhouses and in every part of the country (even borders).

Operators are in largely from the Sahel and northern part of the country, who have moved close to urban areas during the severe droughts in the 1970s and 1980s. Flock size is between 2 and 10 animals. Housing (sometimes ungrouted floors) is provided. Good sanitary protocols are adopted and concentrated feed or agricultural by-products and water are provided to the animals in situ.

Meat yield can go up to 128–130 kg by carcass. Animals are sold to butchers or exported. Milk production per dairy cow is estimated at 210–270 litres/lactation. Surplus is sold to processors with only 5–10 percent of production self-consumed.

4.2.2 Intensive sub-system

Intensive cattle farms are located in peri-urban areas or within cities, differentiated into ‘peri-urban’ (case of Dori, Djibo, Gorom-Gorom in the Sahel) and ‘intra-urban’ in Ouagadougou (Hamdalaye neighborhood).

The intensive cattle system comprises about 2 percent of the cattle population and is practiced by professional operators, retired people, and young farmers.

Modern husbandry practices are adopted, from housing to animal health to feeding. In particular, animals are feed on pasture in the morning (30–40 percent) and supplemented with forage, concentrated feed and agriculture byproducts for 60–70 percent of their ration. Water is provided on site.

Herd size is estimated to be 10–25 cows. Milk productivity per cow is over 3000 litres/lactation, with production largely sold. Young males are fattened or sold to butchers or to neighbors or fatteners.

For meat: The number of cattle and small ruminants slaughtered has increased from 1 449 000 in 2010 to 1 910 000 animals in 2014. Average weight is 250 kg/adult.

Cattle exploitation rate is 14 percent with 1.5 percent for self-consumption (that may get to 6 percent according to socio-cultural needs).

The average carcass weight is 112 kg in ordinary system and 113–114 kg in the fattening system. Production costs are estimated at 1.5 USD/kg and 2 USD respectively in pastoral and agro pastoral systems against 3 USD and 5 USD in the semi-intensive and intensive systems.

The average consumption of meat is 12 kg/person/year with 45–50 percent from beef. Only 27.23 percent of meat consumed in Burkina Faso is inspected by the veterinary services.

The meat market represents a turnover of more than USD 16 billion in 2014 (about 50 percent beef). It will be over USD 30 billion in 2025.

The demand in Ouagadougou and Bobo-Dioulasso for red meat was estimated at 18.950 tonnes in 2012.

The domestic red meat supply was estimated at 42 541 tonnes in 2012 while 44.54 percent of this corresponded to the demand of Ouagadougou and Bobo-Dioulasso (the 2 biggest cities).

There are more than 250 organized livestock markets, out of which only 21 are monitored. The mercurial way gives the average price by unit of cattle as USD 280 to 550 with extremes up to 800 USD/animal (MRA 2014).

For milk: The offer is constituted of local production and imports

Domestic production: there is no official reliable source of information on this indicator. The national production is essentially provided by the extensive farms (over 99 percent) including 110 to 260 litres/lactation. This productivity can reach and exceed 3 600 litres for exotic breeds in the intensive system. So the production of 2014 has been evaluated to fall in a range from 111 870 000 to 264 420 000 litres.

The share of milk collected and treated in qualified units is very low (less than 1 percent).

Self-consumption is estimated at 60 percent in extensive systems and 5–10 percent in intensive systems.

Imports of milk and milk/dairy products: According to the statistics of the customs services, 8 337 716 tonnes of milk and milk products have been imported in 2012 (amounting USD 2.00 billion). Previous studies have shown that the share of imports would vary between 60 and 30 000 000 TEL/year, depending on the price of milk in the International market, because the amounts granted revolve around USD 2–3 billion.

The average annual consumption per person is 17–18 kg.

4.3 Threats and constraints in the cattle production systems of Burkina Faso

The principal threats in the cattle production systems concern (i) the access to natural resources because of obstruction of the tracks to pasture, water sources and urbanization; (ii) disease control and (iii) access to inputs and finance, despite the efforts of some micro-financial institutions.

4.4 Opportunities for cattle sector

Growing demand. Regional demand is growing due to demographic change and urbanization. Even when supply is at its maximum during the peak sales period, prices are not falling and sometimes even continue to increase due to strong demand from coastal countries. The price per kilo live weight can reach 36 to 45 FCFA during the peak sales period.

4.5 Challenges

Regarding the regional context, the main challenge concerns **the availability and quality of information about prices** because weekly analysis of the price of cattle is insufficient to influence trade flows. The communication of information on the markets to the actors involved in the livestock sector through telephone, radio, television, newspapers or other means is a possible strategy to improve the livestock trade. Additional challenges regard (i) the strengthening of marketing with **adequate national slaughterhouse infrastructures and processing**; (ii) better **control of diseases and enforced regulation compliance with international standards to fight diseases** that impact productivity or trade (CBPP, FMD, brucellosis and tuberculosis, etc.); (iii) the encouragement of **good management practices** to

reduce the negative economic impacts related to zoonotic diseases (loss of productivity and markets) and to limit the impact on the environment including greenhouse gas emissions.

5. Conclusion

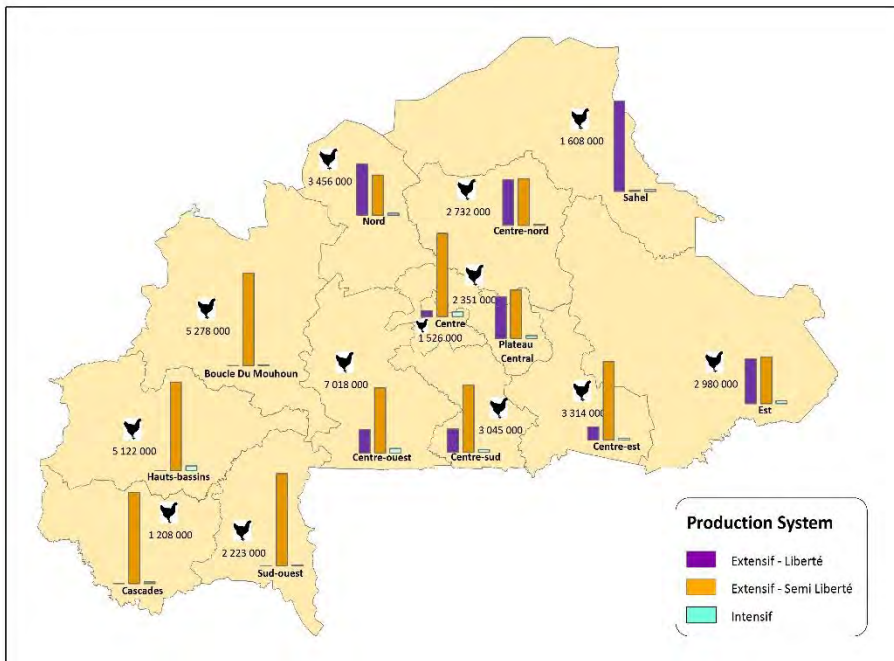
This brief presents a snapshot of cattle and poultry production systems in Burkina Faso, as described and characterized by the Ministry in charge of Livestock, the Ministry in charge of Public Health, the Ministry in charge of the Environment and other stakeholders: ministries in charge of, agriculture, water, administration, information, research, professionals, other private and non-state actors (including professional organizations and civil society organizations).

This common understanding of livestock production systems will support multi-sectoral and multi-disciplinary dialogue among stakeholders to appreciate the production, public health and environmental dimensions of livestock and the formulation of coherent and effective policies and investments.

January 2018. The production of this document has been coordinated by Antonio Mele (FAO) and Drissa Siri (FAO) under the guidance of the Members of the ASL2050 Burkina Faso Steering Committee and in consultation with national livestock stakeholders.

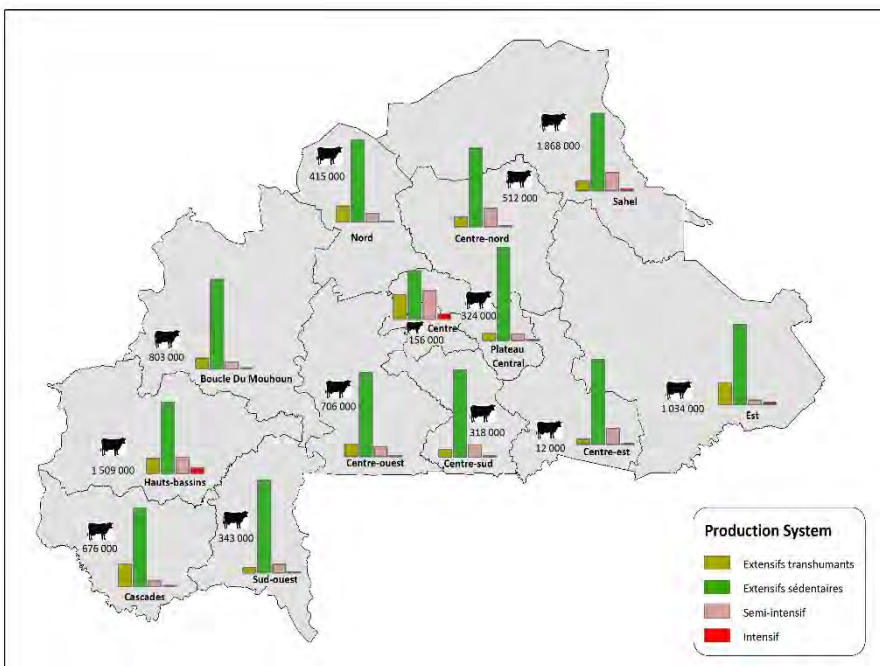
Appendix: maps and tables

Map 1: Poultry distribution by production system and heads in Burkina Faso



Source: GLW 2010 and expert consultations

Map 2: Cattle distribution by production system and heads in Burkina Faso



Source: GLW 2010 and expert consultations

Table A1: List of regions with total number of poultry and relative shares in the different systems in Burkina Faso

Regions	Heads (x1000)	Share (%)	Proportion by production system (%)		
			Liberty	Semi-liberty	Semi-intensive & intensive
Boucle du Mouhoun	5 278	12.5	0	99	1
Cascades	1 208	2.9	0	98	2
Centre	1 526	3.6	6	89	5
Centre-Est	3 314	7.8	14	84	2
Centre-Nord	2 732	6.5	49	50	1
Centre-Ouest	7 018	16.6	25	70	5
Centre-Sud	3 405	8.1	25	72	3
Est	2 980	7.1	48	50	3
Hauts-Bassins	5 122	12.1	0	95	5
Nord	3 456	8.2	55	43	2
Plateau Central	2 351	5.6	45	52	3
Sahel	1 608	3.8	97	1	2
Sud-Ouest	2 223	5.3	0	99	1
Total	42 221	100	28	70	2

Table A2: List of regions with total number of cattle and relative shares in the different systems in Burkina Faso

Regions	Heads (x1000)	Share (%)	Proportion by production system (%)			
			Pastoral	Agro-pastoral	Semi-intensive	Intensive
Boucle du Mouhoun	803	9	10	83	6	1
Cascades	676	7	21	73	5	1
Centre	156	2	23	45	27	5
Centre-Est	427	5	5	79	15	1
Centre-Nord	512	6	9	73	17	1
Centre-Ouest	706	8	12	78	9	1
Centre-Sud	318	4	7	81	11	1
Est	1 034	11	20	74	4	2
Hauts-Bassins	1 509	17	14	66	15	5
Nord	415	5	15	76	8	1
Plateau Central	324	4	7	86	6	1
Sahel	1 868	21	9	72	17	2
Sud-Ouest	343	4	5	86	8	1
Total	9 091	100	12	75	11	2

